

Work Order ID 150939***150939***

Page 1

Monday, September 12, 2016 10:32:15 AM

Item ID: D3560-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Arm Weldment

Start Date: 9/16/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 9/23/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

DAS
21
9-89

Date: SEP 12 2016

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3560

Rev D

130

Pick Kit

0.00

130

Packaging

Memo

0.00

Packaging

4x CC 17-1-30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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OTHER : _____																																																															

Work Order ID 150939

150939

Page 2

Monday, September 12, 2016 10:32:15 AM

Item ID: D3560-041 **Accept** ***N900040100*** **Setup Start** ***NS1***
Revision ID: **Stop** ***NS2***
Item Name: Arm Weldment
Start Date: 9/16/2016 **Start Qty:** 4.00 ***4*** **Cust Item ID:**
Required Date: 9/23/2016 **Req'd Qty:** 4.00 ***4*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** ***NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140	Large Fab	0.00							
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140

Large Fab

Large Fab

Large Fab

Memo

0.38

- 1-Weld assembly as per dwg D3560
 STEP:
 1- clean material (buff bracket and bottom of arm with blue pad)
 2- set up bracket and arm on jig
 3- preheat bracket and arm with torch
 4- clean before welding with brush
 5- set up machine to 135 amps
 6- weld across bottom and top ends
 7- reheat with torch (65 deg C)
 8- on one side weld from bottom to top half way
 9- same for other side (half way)
 10- from half way point weld the rest of the first side (ease off pedal near end)
 11- same for remaining side (ease off pedal near end)

Red: B134785

4x CC 17-1-19

150

150

QC

Quality Control

QC5- Inspect part completeness to step on W/O 0.00

Memo

0.01

(4) 17-01-20

DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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OTHER :																					

Monday, September 12, 2016 10:32:15 AM

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Stop ***NR2***

*** STOCK IN STEP CELL ***
LOCATION: WA003

DAS
36
9-89

**DAS
30
9-89**

JAN 24 2017

④ C. 17-01-24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order ID 150939***1509.39***

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Monday, September 12, 2016 10:32:15 AM

Item ID: D3560-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Arm Weldment
Start Date: 9/16/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 9/23/2016 Req'd Qty: 4.00 ***4*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.07							
Quality Control									

DAS
21
9-89

JAN 25 2017

JAN 24 2017

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : _____			

Picklist Print

Monday, September 12, 2016 10:32:19 AM

Page 1

Work Order ID: 150939

150939

Parent Item: D3560-041

D3560-041

Parent Item Name: Arm Weldment

Start Date: 9/16/2016

Required Date: 9/23/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 07.05.24 EC
IPP rev B ECN 987 07.10.09 EC verified by: DD
IPP Rev:C ECN1048 07-12-18 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2808 *D2808* Spacer		Manufactured	No				Each	113.0000		4			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				113					
				146529				6					
				149435				107					
D3560-1 *D3560-1* Arm		Manufactured	No				Each	21.0000		4			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				21		B150436			
				149443				5					
				149444				8					
				149445				8					
D3592-1 *D3592-1* Plate		Manufactured	No				Each	26.0000		4			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA003				26		B149400			
				146886				8					
				149399				18					

DAS
36
9-89

17/01/24

CC 17-1-18

③

①

CC 17-1-18

④

DQA: _____ Date: _____



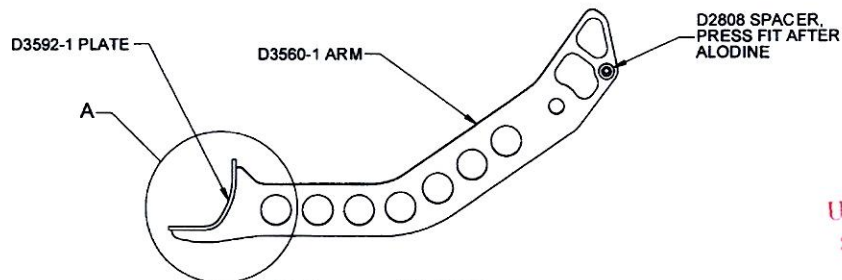
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

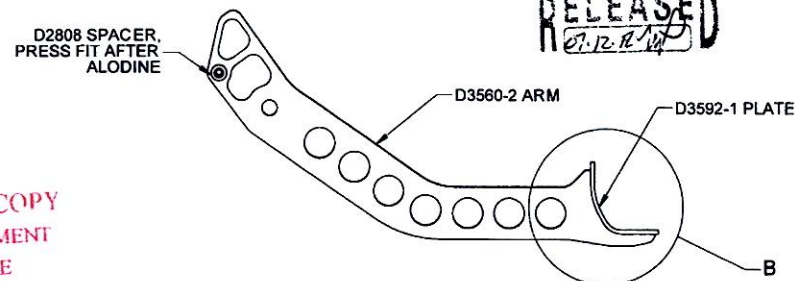
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation			Disposition																		
						Completed By															
						Lead hand / Supervisor Approval Verification															
			QC / QA Coordinator Approval																		
Root Cause			FAULT CATEGORY																		
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : _____																					

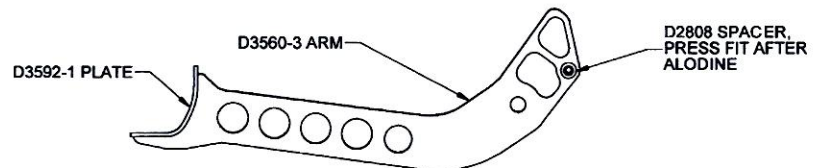
RELEASED
21-12-12



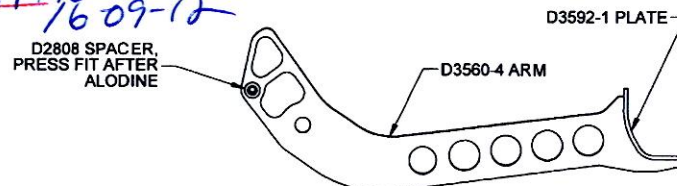
D3560-041 ARM WELDMENT



D3560-042 ARM WELDMENT

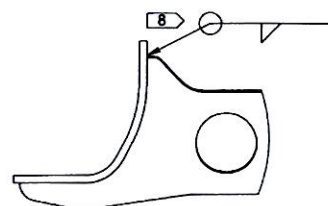


D3560-043 ARM WELDMENT



D3560-044 ARM WELDMENT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150939 MJS
1609-12



**DETAIL A
SCALE 1 : 2**

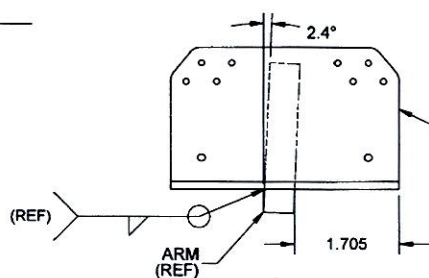
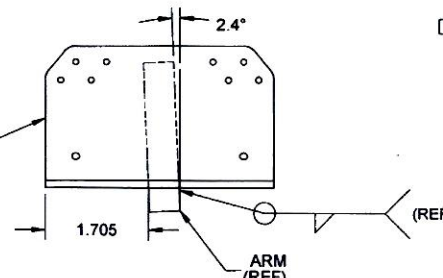


PLATE
(REF)



**DETAIL B
SCALE 1 : 2**

PARTS LIST

QTY -041	QTY -042	QTY -043	QTY -044	P/N	DESCRIPTION
X				D3560-041	ARM WELDMENT
	X			D3560-042	ARM WELDMENT
		X		D3560-043	ARM WELDMENT
			X	D3560-044	ARM WELDMENT
1	1	1	1	D2808	SPACER
1				D3560-1	ARM
	1			D3560-2	ARM
		1		D3560-3	ARM
			1	D3560-4	ARM
1	1	1	1	D3592-1	PLATE

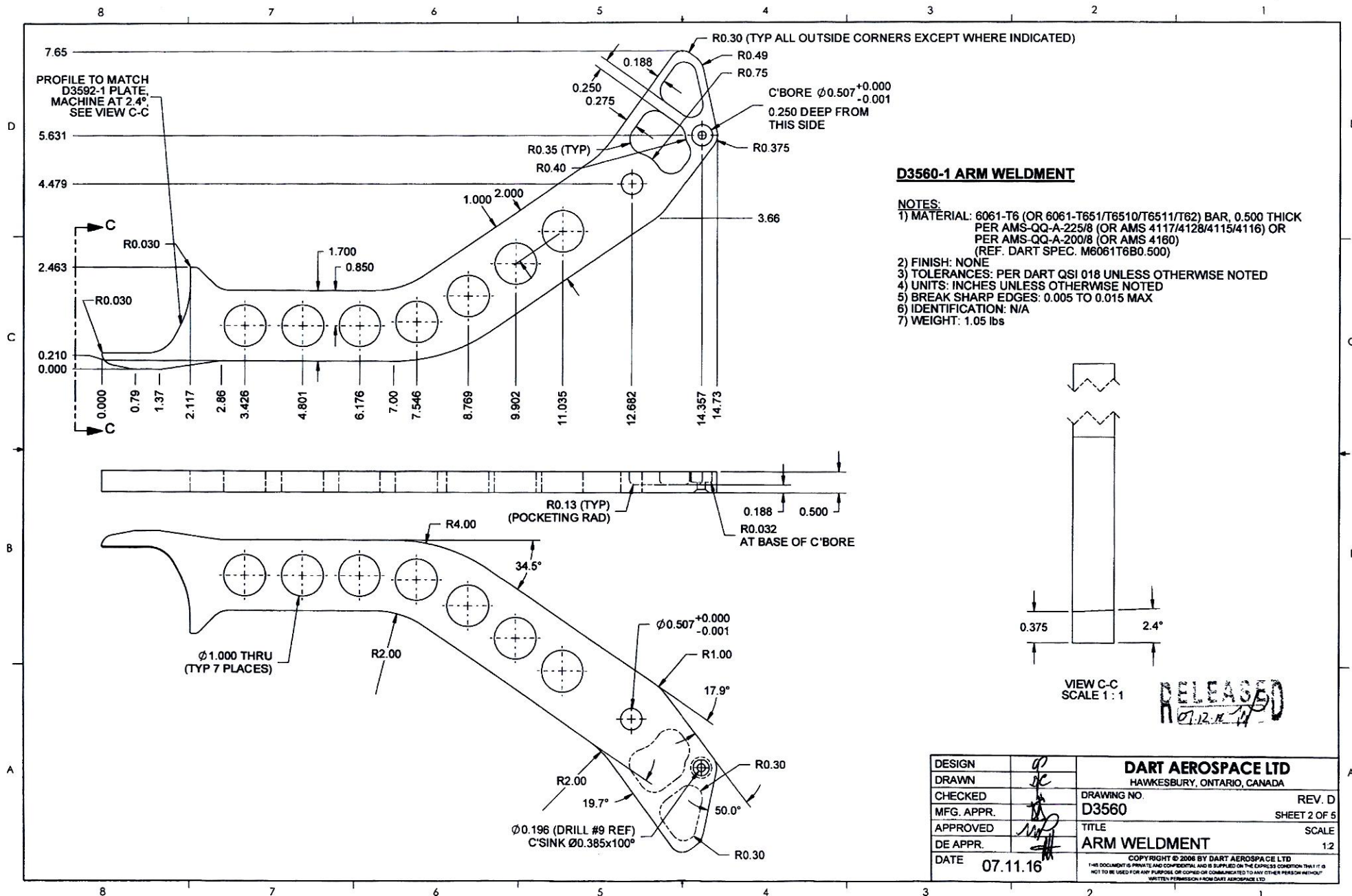
- NOTES:**
 1) MATERIAL: N/A
 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
 6) IDENTIFICATION: N/A
 7) WEIGHT: 1.23 lbs (TYP)
 8) WELDING: PER DART QSI 004

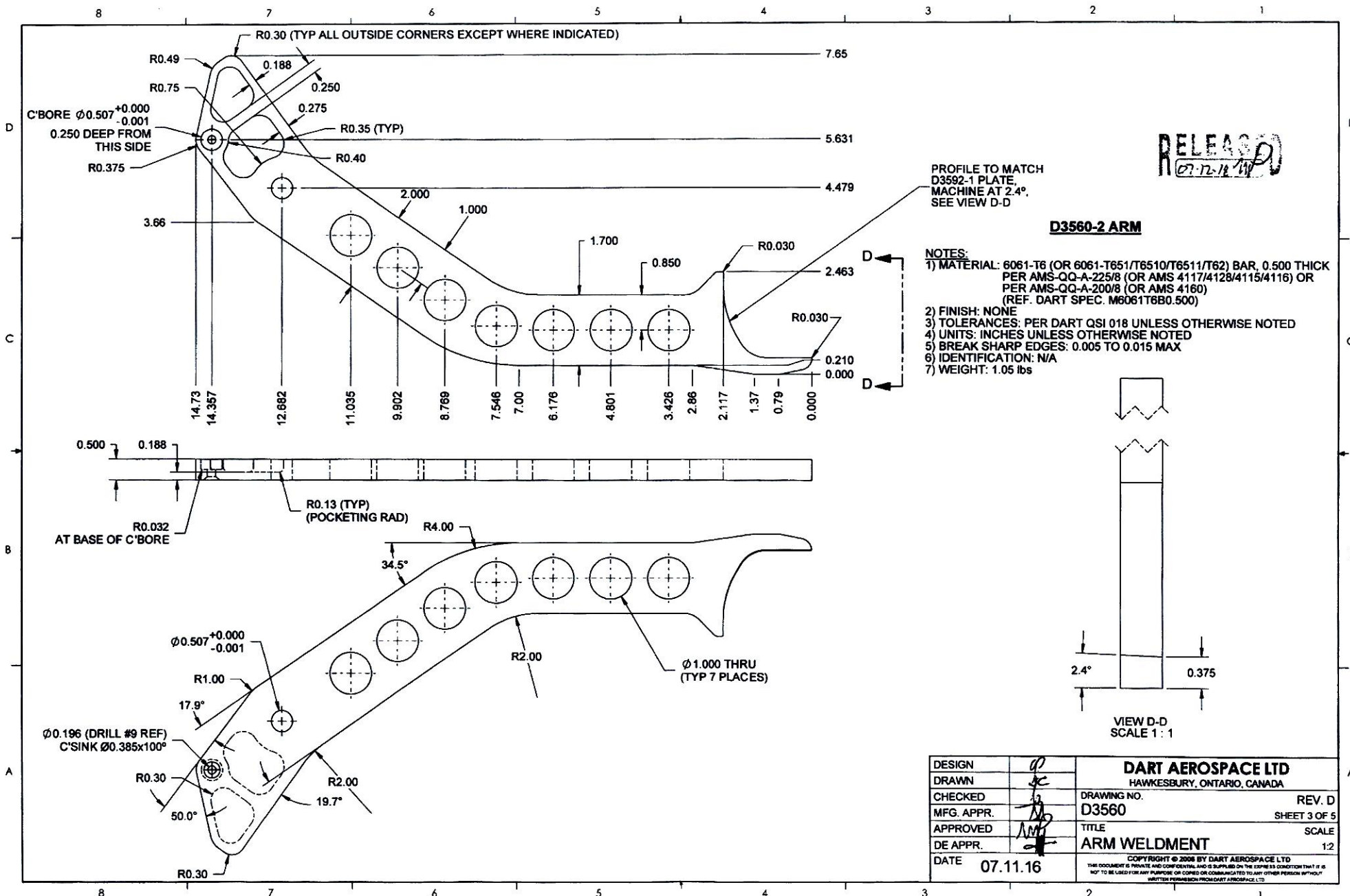
D	ADD D2808 PRESS FIT NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	REMOVE POWDER COAT	CP	07.06.19
B	REDESIGN AS WELDMENT, ADD POCKETS	CP	07.01.15
A	NEW ISSUE	CP	06.09.25
REV.	DESCRIPTION	BY	DATE
DESIGN	19		
DRAWN	19		
CHECKED	19		
MFG. APPR.	19		
APPROVED	19		
DE APPR.	19		
DATE	07.11.16		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

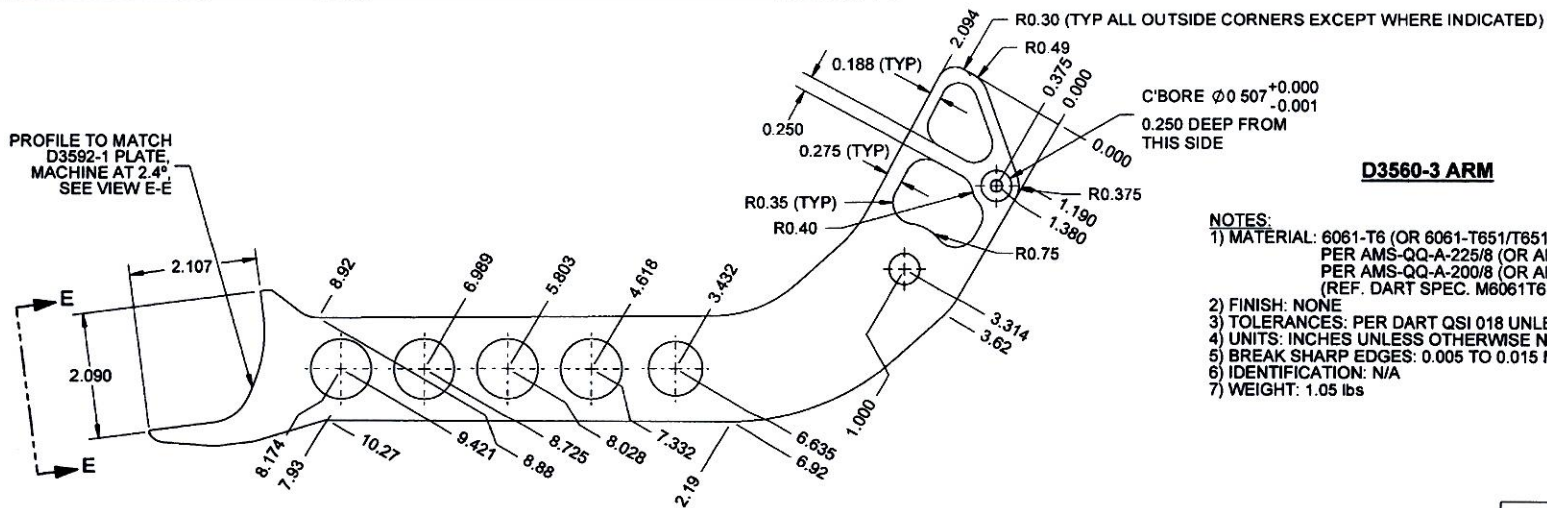
DRAWING NO. **D3560** REV. D
TITLE **ARM WELDMENT** SCALE 1:4

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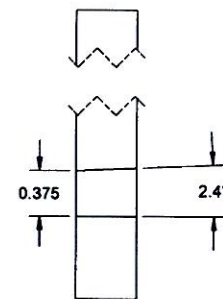
PROFILE TO MATCH
D3592-1 PLATE
MACHINE AT 2.4°
SEE VIEW E-E



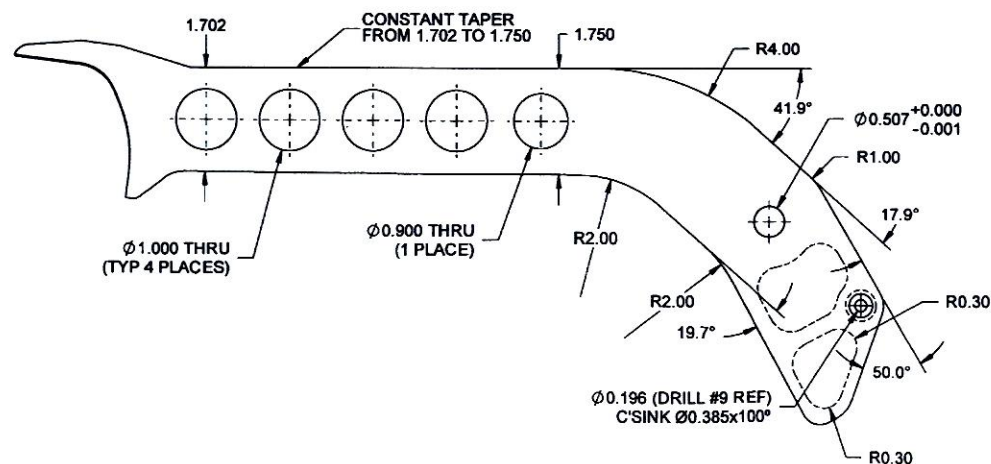
D3560-3 ARM

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR, 0.500 THICK
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.500)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.05 lbs



VIEW E-E
SCALE 1 : 1



DESIGN	QC	DART AEROSPACE LTD	
DRAWN	AC	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AC	DRAWING NO.	REV. D
MFG. APPR.	AC	D3560	SHEET 4 OF 5
APPROVED	MO	TITLE	SCALE
DE APPR.	AC	ARM WELDMENT	1:2
DATE	07.11.16	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
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07.11.16

